

**REMARKS**

**I. Status of the Claims**

Claims 30, 47-50 and 52-56 are pending in this application. No claim is amended herein.

**II. Summary of the Interview**

Applicants wish to thank the Examiner for the courtesy extended to Applicants' representatives during the interview on January 22, 2009. Applicants are in agreement with the statements regarding the substance of the interview as presented in the Interview Summary.

**II. Rejections under 35 U.S.C. § 103**

Claims 30, 47-50 and 52-56 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,900,545 ("Wisotzki et al."). Office Action at pages 3-5. Applicants respectfully traverse this rejection.

The Examiner alleges that Wisotzki is directed to "a method for regeneration of hair split-ends and for caring for and revitalizing mistreated hair, comprising applying to the hair, a treatment composition comprising mono- or disaccharides, more especially, the pentoses (5-C atoms) and hexoses (6 C-atoms), and also the disaccharides dervied from the pentoses and hexoses. . ." Office Action at page 3. The Examiner notes that Wisotzki teaches suitable monosacchrides including "glucose, mannose, galactose, ribose, arabinose, xylose, fructose and sorbose, while suitable disaccharides include sucrose, lactose, maltose, and cellobiose (col. 2, lines 36-49)" (emphasis in original). *Id.* at 3-4. Finally, the Examiner alleges that Wisotzki teaches "that the sugars are

present in the composition in percentages ranging from 0.1% to 8% by weight (col. 2, lines 24-30). *Id.* at 5. As a result, the Examiner argues that she has presented a prima facie case of obviousness. *Id.* at 6. For the following reasons, Applicants respectfully disagree with the Examiner's rejection.

As previously submitted, Applicants believe that the Examiner has failed to established a prima facie case of obviousness. However, as discussed at the interview the specification demonstrates the unexpected and surprising benefits of using xylose to treat and protect keratinous fibers from extrinsic damage. Applicants direct the Examiner to these unexpected results to support their position of patentability.

Example 4 of the specification describes the effect of hexoses versus pentoses on damaged hair. Surprisingly, the data reveals that the use of **xylose** to treat hair as compared to **glucose** (and other hexoses) significantly improves dry tensile strength and the alpha structure of the bleached hair after 12 heat cycles and the bleached/permed hair after 12 heat cycles (See table 13). Specifically, extrinsic conditions may disrupt the organized structure of the hair fibers, called the alpha structure, which may be accompanied by a decrease in tensile strength. However, Applicants found that the alpha structure of hair treated with xylose is surprising better than hair treated with glucose. The alpha structure for hair treated with glucose is 5.56 +/- 1.16 J/g compared to 9.74 +/- 2.13 J/g for hair treated with xylose. The dry tensile strength is also improved for hair treated with xylose. As shown in table 13, the dry tensile strength for hair treated with glucose is 913.9 +/- 158.2 J/m<sup>2</sup> compared to 1,204 +/- 215 J/m<sup>2</sup> for hair treated with xylose, which clearly indicates the unexpected qualities of the present invention.

Moreover, a similar and significant improvement was also noted when comparing the use **xylose** versus **glucose** for wet tensile strength and the alpha structure of the bleached hair after 12 heat cycles and the bleached/permed hair after 12 heat cycles (See table 14). For instance, the wet tensile strength for bleached hair treated with glucose was  $187.0 \pm 74.8 \text{ J/m}^2$  as compared to  $432.0 \pm 137.0 \text{ J/m}^2$  for hair treated with xylose.

In view of *Wistozki*, which expressly prefers glucose, Applicants submit that the teachings of Example 4 indisputably rebuts any suggestion of a prima facie case of obviousness. The results make clear that hair treated with the inventive composition showed improved strength and protection for hair exposed to harsh extrinsic conditions. Evidence showing that a claimed composition is unexpectedly superior to those of the prior art "in one of a spectrum of common properties.... can be enough to rebut a prima facie case of obviousness." M.P.E.P. § 716.02(a) (quoting *In re Chupp*, 816 F.2d 643, 646, 2 USPQ2d 1437, 1439 (Fed. Cir. 1987)). Accordingly, Applicants respectfully requests that the rejections under 35 U.S.C. § 103(a) be withdrawn.

### III. Conclusion

Applicants respectfully request the reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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